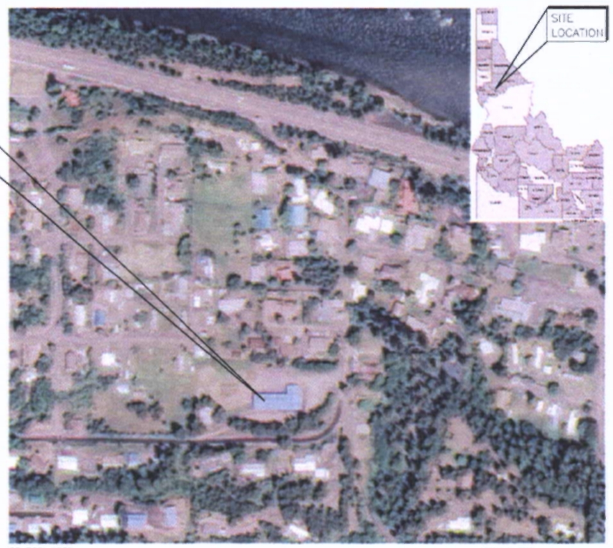
OFASF 1.9.11
OFAAR 1.9.11
4/1/2015

2015 SITE RESTORATION REPAIRS

OROFINO ASBESTOS SITE
OROFINO, CLEARWATER COUNTY, IDAHO
TDD NO.: 14-07-0012
PAN NO.: 1004530.0004.070.01



SOURCE: USGS

SCALE IN FEET 0 200 400 600

SITE VICINITY MAP

SCALE: 1" = 200'±

SOURCE: GOOGLE EARTH, IMAGERY DATE 8/17/2013

SCALE IN FEET 0 40 80 120

SITE LOCATION MAP

SCALE: 1" = 40'±

LIST OF DRAWINGS

DRAWING NO.	TITLE
1	VICINITY MAP, SITE LOCATION MAP, AND SHEET INDEX
2	SITE SURVEY AND RESTORATION PLAN
3	DRY RETENTION BASIN DRAINAGE DETAILS
4	DRAINAGE SWALE DETAILS
5	SITE CONTOUR DETAILS
6	ASPHALT REPAIR DETAILS

DRAWING NOTES:

1) Existing storm drainage facility details provided by JM Engineering, Spokane, Washington.

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Designed by M. FULTON | Date 04/2015
Drawn by TCC | TDD No. 14-07-0012
Reviewed by J. PETERSEN | PAN No. 1004530.0004.070.01
Approved by CAMPBELL | Scale AS SHOWN

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2015 SITE RESTORATION REPAIRS
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VICINITY MAP, SITE LOCATION MAP, AND SHEET INDEX

Sheet reference number:
C-1
SHEET 1 OF 6

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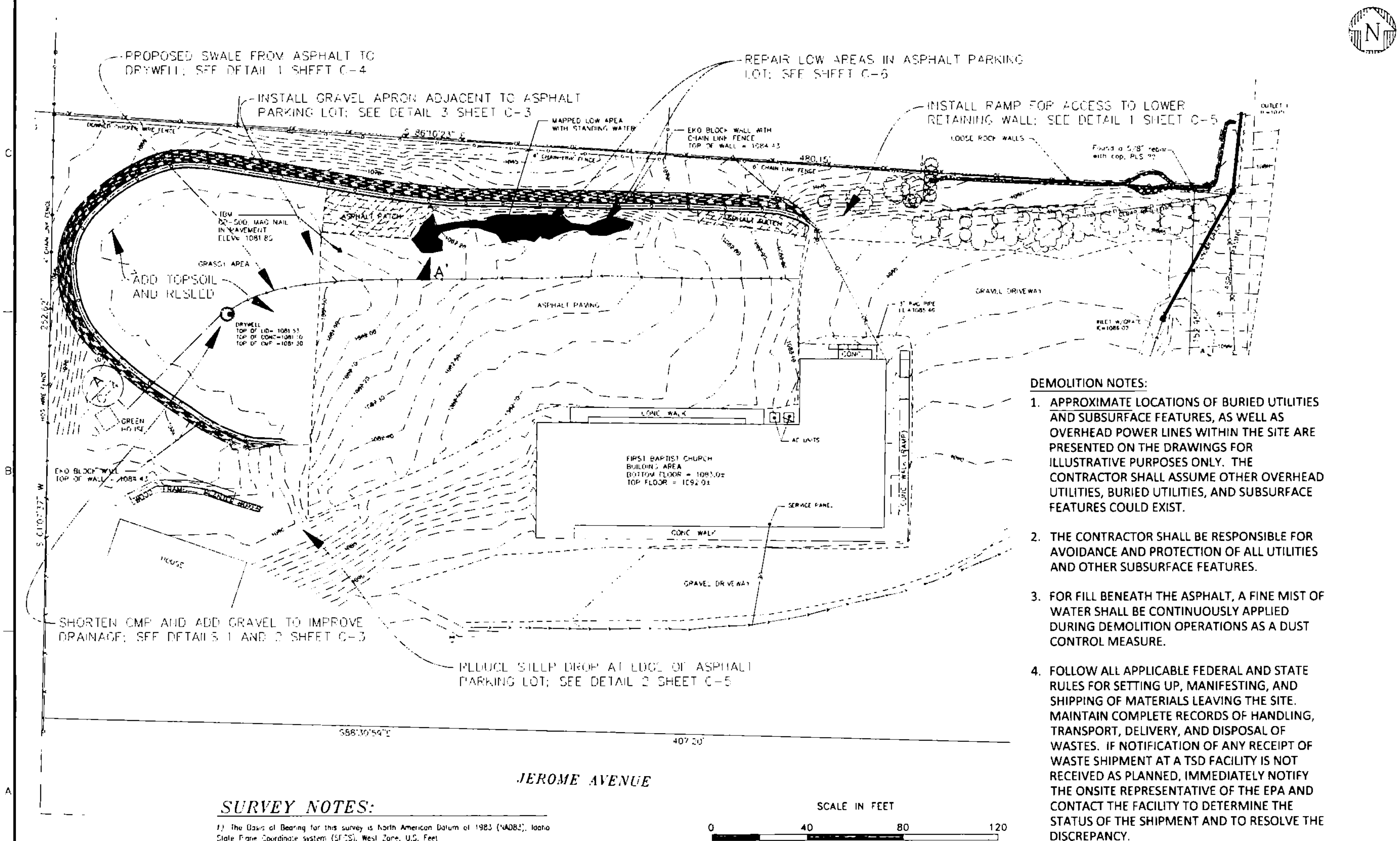

DEMOLITION NOTES:

1. APPROXIMATE LOCATIONS OF BURIED UTILITIES AND SUBSURFACE FEATURES, AS WELL AS OVERHEAD POWER LINES WITHIN THE SITE ARE PRESENTED ON THE DRAWINGS FOR ILLUSTRATIVE PURPOSES ONLY. THE CONTRACTOR SHALL ASSUME OTHER OVERHEAD UTILITIES, BURIED UTILITIES, AND SUBSURFACE FEATURES COULD EXIST.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDANCE AND PROTECTION OF ALL UTILITIES AND OTHER SUBSURFACE FEATURES.
3. FOR FILL BENEATH THE ASPHALT, A FINE MIST OF WATER SHALL BE CONTINUOUSLY APPLIED DURING DEMOLITION OPERATIONS AS A DUST CONTROL MEASURE.
4. FOLLOW ALL APPLICABLE FEDERAL AND STATE RULES FOR SETTING UP, MANIFESTING, AND SHIPPING OF MATERIALS LEAVING THE SITE. MAINTAIN COMPLETE RECORDS OF HANDLING, TRANSPORT, DELIVERY, AND DISPOSAL OF WASTES. IF NOTIFICATION OF ANY RECEIPT OF WASTE SHIPMENT AT A TSD FACILITY IS NOT RECEIVED AS PLANNED, IMMEDIATELY NOTIFY THE ONSITE REPRESENTATIVE OF THE EPA AND CONTACT THE FACILITY TO DETERMINE THE STATUS OF THE SHIPMENT AND TO RESOLVE THE DISCREPANCY.

SURVEY NOTES:

1) The Basis of Bearing for this survey is North American Datum of 1983 (NAD83), Idaho State Plane Coordinate system (SPCS), West Zone, U.S. Feet
2) This survey was performed using a Nikon DTM-500 series Total Station Theodolite with a TDS Data Collector and a Topcon Hyper-Plus Realtime GPS with a TDS Data Collector
3) This survey has an unadjusted mathematical error of closure exceeding the required minimum of one (1) part in five thousand (5000).
4) No attempt was made to show all the physical features of the property or prescriptive easements, recorded or unrecorded, written or unwritten.
5) The field work for this survey was preformed on 2-10-2015 and additional work on 3-03 and 3-15-2015.
6) Survey performed by Cuddy and Associates, Orofino, Idaho

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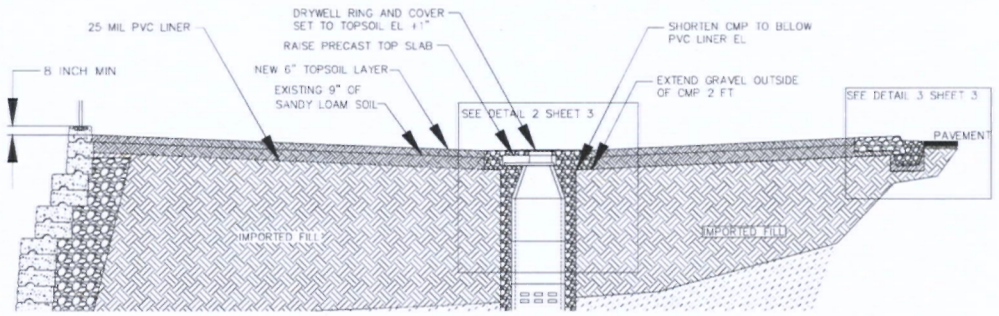
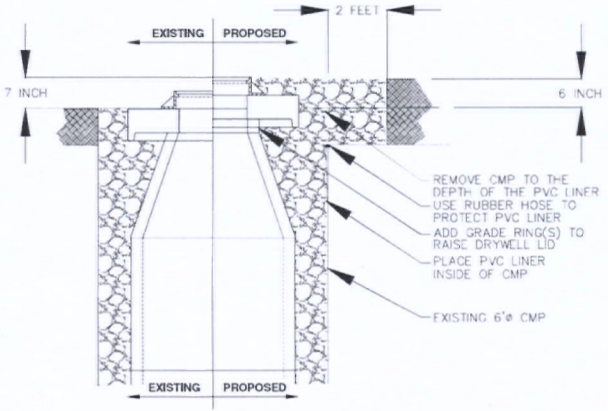
SITE SURVEY AND RESTORATION PLAN

Sheet reference number: C-2



1/3 PROPOSED STORM DRAINAGE FACILITY DETAIL
NOT TO SCALE



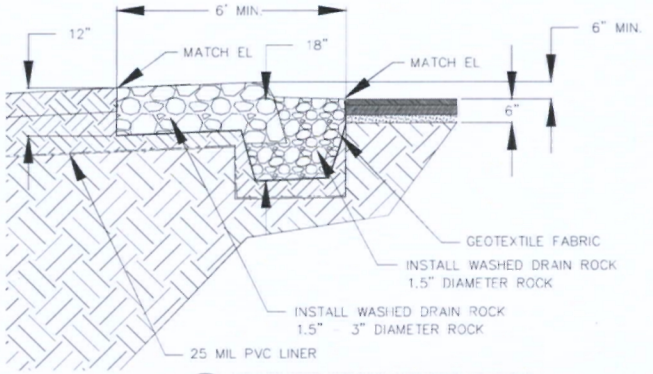
2/3 DRYWELL DRAINAGE DETAIL
NOT TO SCALE

DRAINAGE MATERIAL SPECIFICATION NOTES

1. WASHED ROCK APRON PLACED ALONG PARKING LOT TO EXISTING SANDY LOAM LAYER INTERFACE IS TO CONSIST OF 1.5-INCH WASHED DRAIN ROCK, AND A TRANSITION OF 1.5-TO-3-INCH WASHED DRAIN ROCK IS TO BE PLACED AT THE NEW TOPSOIL INTERFACE (SEE DETAIL 3 THIS SHEET). GEOTEXTILE AT THE INTERFACE SHALL MATCH GEOTEXTILE SPECIFICATIONS (SEE SHEET C-4).
2. DRYWELL DRAINAGE TO BE PLACED AROUND THE DRYWELL UP TO THE GRADE OF THE DRYWELL INLET IS TO CONSIST OF 1.5-TO-3-INCH WASHED DRAIN ROCK (SEE DETAIL 1 THIS SHEET).

TOPSOIL NOTES

1. THE TOPSOIL USED FOR THE UPPER 6 INCHES OF DRY RETENTION BASIN AND FOR CONTOURING OTHER AREAS SHALL BE A CLEAN, LOAMY MATERIAL FREE OF ROOTS, CONTAMINANTS, AND ALL OTHER DELETERIOUS AND OBJECTIONABLE MATERIAL MEETING IDAHO TRANSPORTATION DEPARTMENT (ITD) TOPSOIL SPECIFICATIONS AND TABLES C-3.1 AND C-3.2.
2. SUBMIT CERTIFICATION FROM PROPERTY OWNER OF EACH SOURCE OF IMPORTED EARTHEN MATERIAL THAT THE MATERIAL IS CLEAN AND THAT THERE IS NO REASON TO BELIEVE OR SUSPECT THAT THE MATERIAL MAY BE CONTAMINATED OR CONTAIN HAZARDOUS SUBSTANCES. PROVIDE DOCUMENTATION OF SUPPORTING CHEMICAL ANALYSES, IF AVAILABLE.
3. TOPSOILS SHALL BE EVALUATED PRIOR TO SEEDING OPERATIONS TO DETERMINE LIMITING GROWTH FACTORS. PROFESSIONAL SITE EVALUATION AND SOIL FERTILITY TESTING SHALL BE PERFORMED BY THE CONTRACTOR FOR EACH BORROW SOURCE TO DETERMINE QUANTITIES OF ORGANIC AND CHEMICAL AMENDMENTS NEEDED FOR OPTIMUM GROWTH. APPLY RECOMMENDED FERTILIZER/AMENDMENTS BASED ON SOIL FERTILITY TESTING.
4. WORK AMENDMENTS INTO EXISTING SANDY LOAM LAYER PRIOR TO PLACING NEW TOPSOIL BY LIGHTLY TILLING. ONLY TILL DRY TO MOIST SOILS, WET SOIL MUST BE DRIED PRIOR TO TILLING SO THAT SOIL DOES NOT EXUDE WATER WHEN SQUEEZED AND BREAKS UP EASILY WITH SLIGHT HAND PRESSURE.



3/3 WASHED ROCK APRON DETAIL
NOT TO SCALE

Table C-3.1 Topsoil Gradation

Sieve Size	Percentage by Weight Required to Pass a Square Mesh Sieve
1 inch	98-100
No. 4	95-100
No. 8	80-100
No. 200	15-80

Table C-3.2 Topsoil Chemistry

Property	Minimum	Maximum
pH	5.5	7.8
ESP	--	10
EC	--	80
Organic Material	0.5	15

ESP = Exchangable Sodium Percentage
EC = Electrical Conductivity, mOhms/cm at 77 deg.

INSTALLATION NOTES

1. PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE DRYWELL LID AND RING STRUCTURE (THE DRYWELL LID HAS LIFTING RINGS PROVIDED).

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DRY RETENTION BASIN DRAINAGE DETAILS

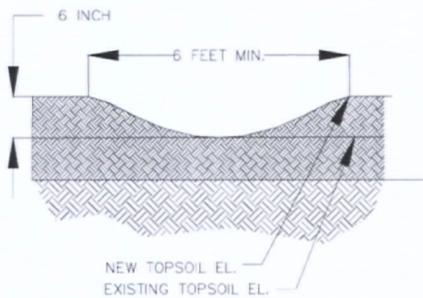
Sheet reference number
C-3
SHEET 3 OF 6

GEOTEXTILE NOTES

1. GEOTEXTILE SHALL BE USED AS A SEPARATION MATERIAL BETWEEN ASBESTOS-CONTAMINATED FILL MATERIALS AND THE PAVEMENT SUBBASE AGGREGATE LAYER, BETWEEN THE ASBESTOS-CONTAMINATED FILL AND THE RETAINING WALL AGGREGATE DRAINAGE LAYER, BETWEEN ASBESTOS-CONTAMINATED FILL AND CLEAN FILL IN DRY POND AREAS, AND AS NEEDED TO SEPARATE ASBESTOS CONTAMINATED FILL FROM CLEAN FILL OR SOIL LAYERS FROM AGGREGATE LAYERS.
2. SEPARATION FABRIC MATERIAL SHALL CONSIST OF NONWOVEN FILAMENTS FORMED FROM A PLASTIC YARN OF A LONG CHAIN SYNTHETIC POLYMER COMPOSED OF AT LEAST EIGHTY-FIVE PERCENT (85%) BY WEIGHT OF POLYOLEFINS, OR POLYESTERS, AND SHALL CONTAIN STABILIZERS AND/OR INHIBITORS ADDED TO THE BASE PLASTIC TO MAKE THE FILAMENTS RESISTANT TO DETERIORATION DUE TO ULTRAVIOLET AND HEAT EXPOSURE. THE TEXTURE OF THE FABRIC SHALL BE SUCH THAT THE ROAD COURSE WILL REMAIN IN AN EQUILIBRIUM STATE AND NOT SLIP OR SLIDE. THE SEPARATION FABRIC SHALL BE ROT PROOF, MILDEW PROOF, INSECT RESISTANT, HAVE A HIGH DIMENSIONAL STABILITY WHEN SET, HAVE GOOD DRAINAGE CHARACTERISTICS, HAVE A HIGH RESISTANCE TO TEAR PROPAGATION IN ALL DIRECTIONS, AND MEET THE FOLLOWING MINIMUM CONDITIONS AND ASTM TESTS FOR THE GRADATION OF RIPRAP SPECIFIED IN TABLE C-4.1 AS REQUIRED UNDER ITD STANDARD 718.07, SUBGRADE SEPARATION GEOTEXTILE PROPERTY REQUIREMENTS.

Table C-4.1
Separation Fabric Test Specifications

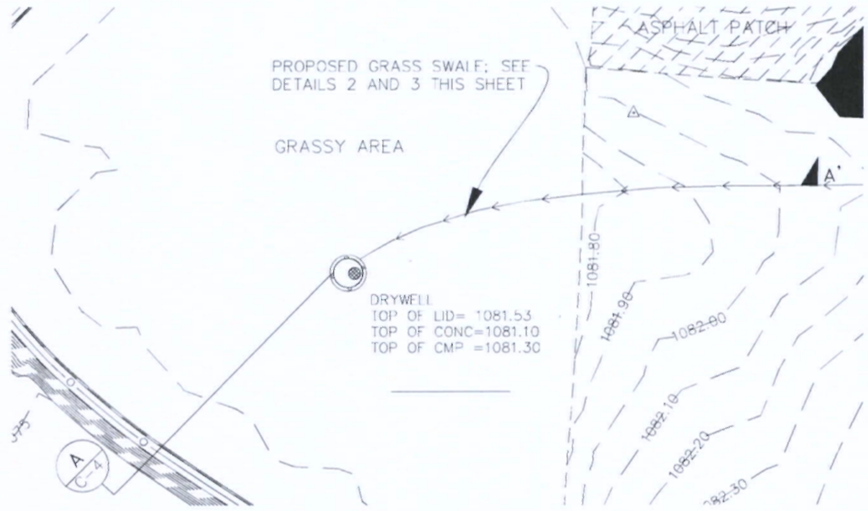
Testing Description and Method	Minimum Conditions**
Weight of Fabric (oz/sq yd), ASTM D 3776 (Mod.)	6
Tear Strength (lbs) ASTM D 4533	70/40*
Grab Tensile Strength (lbs), ASTM D 4632	180/115*
Puncture Resistance (lbs, ASTM D 4833	70/40*
Permittivity (sec-1), ASTM D 4491	0.02
Equivalent Opening Size (U.S. standard sieve size), ASTM D 4751	30



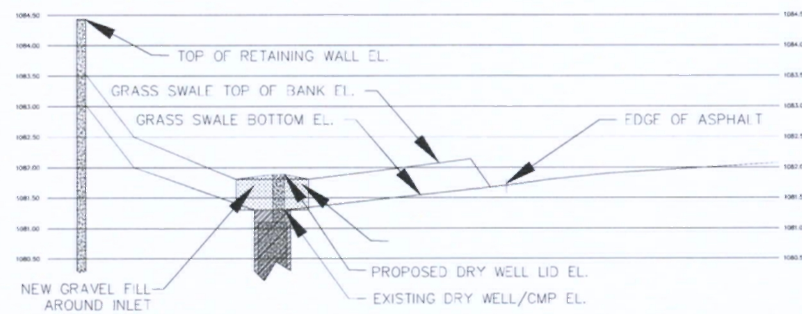
3/4 GRASS SWALE DETAIL
NOT TO SCALE

GRASS SWALE NOTES

1. THE GRASS SWALE SHALL CONVEY STORMWATER FROM THE PARKING LOT TO THE GRAVEL SURROUNDING THE INLET FOR THE DRYWELL.
2. THE BOTTOM ELEVATION OF THE GRASS SWALE SHALL CLOSELY MATCH THE EXISTING DRY RETENTION BASIN ELEVATION WITH MINIMAL GRADING AS NECESSARY FOR POSITIVE DRAINAGE.



1/4 GRASS SWALE PLAN ALONG LINE A - A'
SCALE: 1" = 10' 0"



2/4 GRASS SWALE PROFILE ALONG LINE A - A'
HORIZONTAL SCALE: 1" = 10'-0" VERTICAL SCALE: 1" = 0'-6"

SCALE OF FEET (HORIZONTAL) SCALE OF FEET (VERTICAL)

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Approved by: T. CAMPBELL	AS SHOWN

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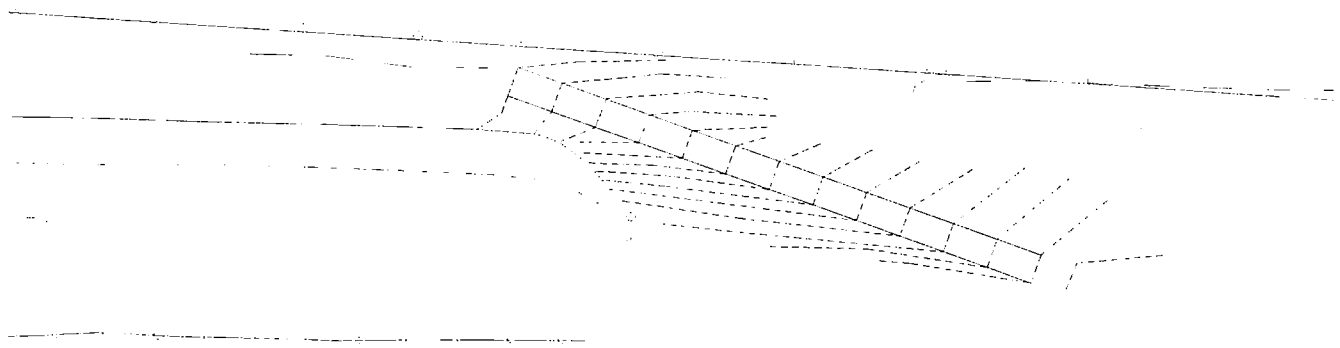
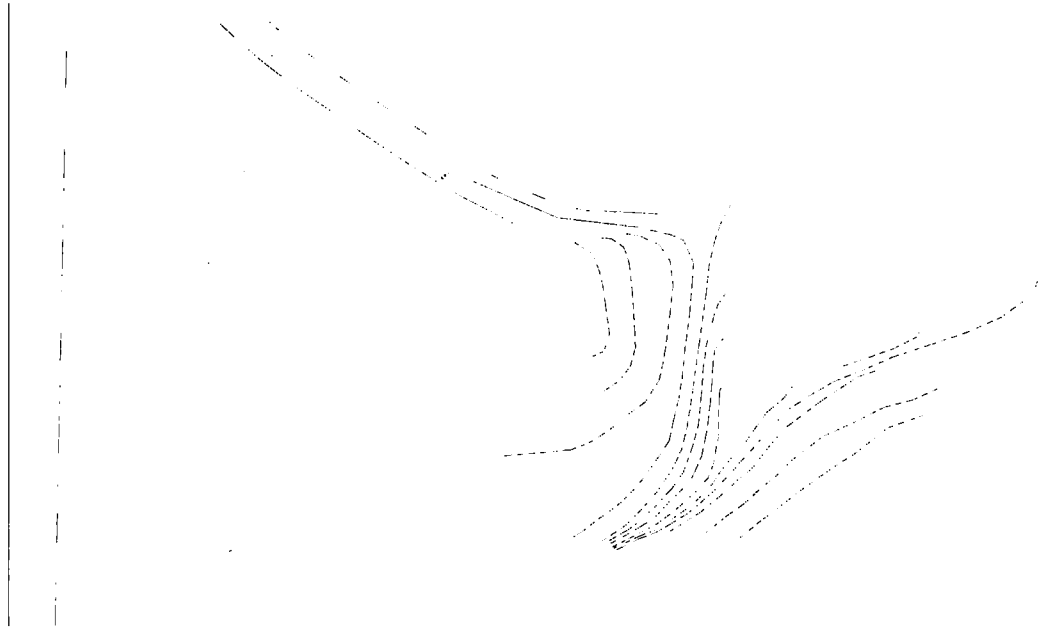
DRAINAGE SWALE DETAILS

Sheet reference number: C-4



1/5 LOWER WALL RAMP PLAN
PROPOSED CONTOUR LINES SHOWN AT 1 FOOT INTERVALS

SCALE IN FEET
0 10 20 30



2/5 PARSONAGE CONTOUR PLAN
PROPOSED CONTOUR LINES SHOWN AT 0.1 FOOT INTERVALS

SCALE IN FEET
0 10 20 30

CONTOUR NOTES

1. THE LOWER WALL RAMP MAXIMUM SLOPE IS 13%.
2. TIE LOWER WALL RAMP ELEVATIONS INTO EXISTING WALL BASE ELEVATIONS. NO SOIL MAY BE REMOVED FROM AN AREA FORMING A 45-DEGREE WEDGE FROM THE WALL BASE.
3. THE RAMP DRIVING SURFACE SHALL BE PLACED IN MAXIMUM 6" LIFTS AND COMPACTED TO ACHIEVE NINETY-EIGHT PERCENT (98%) OF MAXIMUM DENSITY ACCORDING TO ASTM D1557.
4. DURING RAMP SOIL PLACEMENT AND COMPACTION, MOISTURE CONTENT SHALL BE WITHIN PLUS OR MINUS TWO PERCENT (+/- 2%) OF THE OPTIMUM MOISTURE CONTENT.
5. USE SMALL PORTABLE COMPACTORS.
6. VERIFY THAT FINAL PARSONAGE CONTOURS DO NOT DIRECT WATER TOWARD THE FOUNDATION OR ALLOW FOR POOLING OF WATER WITHIN THE AREA FRAMED BY THE PLANTER BOXES.

SEEDING NOTES

1. BROADCAST SEED WITH CERTIFIED PURE LIVE SEED (PLS) OF 4 LBS PER ACRE SHEEP FESCUE AND 4 LBS PER ACRE HARD FESCUE.
2. SUBMIT THE PROPOSED SEED MIX INFORMATION, INCLUDING MANUFACTURER'S LABEL; PROPOSED MULCH/HYDROMULCH SPECIFICATIONS AND APPLICATION RATE.
3. APPLY STRAW NET MULCH OVER SEEDED AREAS. IF MULCH IS NOT USED THE SURFACE MUST BE ROLLED TO ENSURE ADEQUATE SEED TO SOIL CONTACT. ENSURE THAT MULCH IS CERTIFIED IN THE STATE OF IDAHO BY APPROVED STATE AGENCY AND DECLARED "NOXIOUS WEED FREE".
4. ALL SEEDING MUST BE COMPLETED BY MAY 15.

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SITE CONTOUR DETAILS

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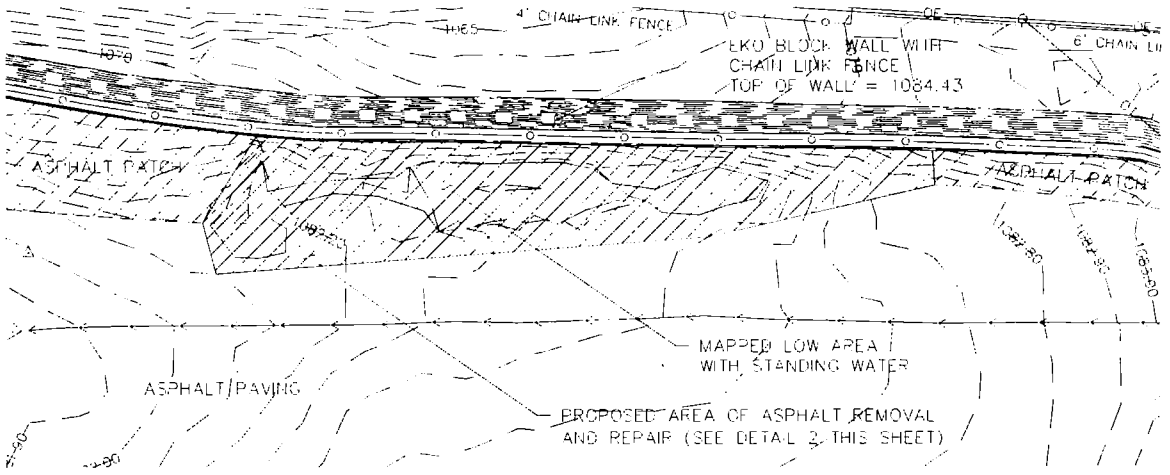
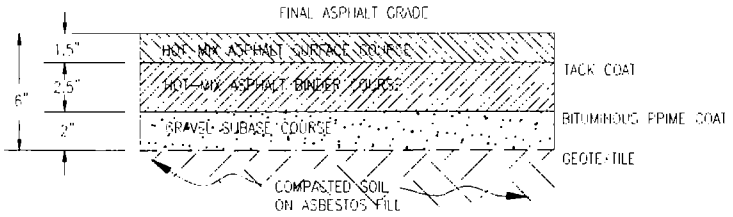


1/6 ASPHALT REPAIR PLAN
SCALE 1" = 10'-0"



2/6 ASPHALT REPAIR CROSS-SECTION
NOT TO SCALE

ASPHALT NOTES

1. USE IDAHO TRANSPORTATION DEPARTMENT, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION [IDASPEC] FOR ASPHALT MATERIALS.
2. THE EXISTING ASPHALT SHALL BE SAWCUT THROUGH THE ENTIRE ASPHALT SECTION PRIOR TO EXCAVATION.
3. SAWCUT EDGES ARE TO BE TACKED WITH HOT LIQUID ASPHALT.
4. WORK RESULTING IN IRREGULAR TRENCH WIDTHS OR INCIDENTAL DAMAGE TO THE LOT SURFACE WILL REQUIRE ANOTHER SAWCUT AND SUBSEQUENT REMOVAL OF ASPHALT.
5. RESTORE ASPHALT SECTION IN ACCORDANCE WITH THE APSHALT REPAIR CROSS SECTION SHOWN IN DETAIL 2 SHEET 6.
6. ASPHALT JOINTS/SEAMS SHALL BE SEALED WITH HOT LIQUID ASPHALT, OR APPROVED EQUAL, AND SANDED.
7. PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION.
8. ASPHALT GRANULAR BASE AND SUBBASE COURSES SHALL BE SIZE THREE-QUARTER INCH (¾") MEETING REQUIREMENTS AS SPECIFIED IN IDASPEC SECTIONS 703.01 AND 703.04.

SAMPLING AND TESTING NOTES

1. THE ERRS CONTRACTOR SHALL PERFORM IN-PLACE COMPACTION TESTING ON FILL PLACED FOR THE ASPHALT PARKING AREA; TO VERIFY RESULTS, THE ENGINEER MAY REQUEST ADDITIONAL IN-PLACE COMPACTION CONTROL TESTING.
2. IN-PLACE DENSITY AND MOISTURE CONTENT WILL BE DETERMINED IN ACCORDANCE WITH ASTM D 2922 WITH RESULTS SUBMITTED DAILY.
3. FREQUENCY OF IN-PLACE DENSITY TESTS SHALL BE EVERY TWO LIFTS, EVERY 100 SQUARE FEET ON THE BASE FOR THE ASPHALT PARKING LOT, OR EVERY DAY (WHICHEVER REQUIRES MORE TESTS) ON FILL MATERIAL.
4. THE START CONTRACTOR'S TESTING LABORATORY SHALL PERFORM COMPACTION CONTROL TESTING AND OTHER TEST METHODS ON SAMPLES OF EXISTING BASE MATERIALS. THE ERRS CONTRACTOR WILL PERFORM REQUIRED TEST METHODS FOR MATERIALS TRANSPORTED TO SITE. THE FOLLOWING TEST METHODS SHALL BE USED BY THE START CONTRACTOR - MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR NON-GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D 1557.

COMPACTION NOTES

1. THESE COMPACTION NOTES ARE TO BE USED FOR COMPACTING SOIL ON EXISTING FILL AND THE GRAVEL SUBBASE COURSE WHEN PERFORMING ASPHALT REPAIRS.
2. BACKFILL SHALL BE PLACED IN MAXIMUM 6" LIFTS AND COMPACTED.
3. COMPACT TO ACHIEVE NINETY-EIGHT PERCENT (98%) OF MAXIMUM DENSITY ACCORDING TO ASTM D1557.
4. MOISTURE CONTENT SHALL BE WITHIN PLUS OR MINUS TWO PERCENT (+/- 2%) OF THE OPTIMUM MOISTURE CONTENT.
5. USE SMALL PORTABLE COMPACTORS.

CONTROLLED DENSITY FILL NOTES

1. CDF MAY BE USED IN LIEU OF BACKFILL BENEATH THE ASPHALT SURFACE.
2. CDF SHALL BE NON-PERVIOUS, LOW DENSITY CONTROLLED LOW STRENGTH MATERIAL CONSISTING OF PORTLAND CEMENT, FINE AND COURSE AGGREGATE, AND WATER.
3. 28-DAY COMPRESSIVE STRENGTH OF 300 PSI.

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ASPHALT REPAIR DETAILS

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